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C A L I F O R N I A   R I C E   C O M M I S S I O N

May 17, 2007

Mr. Joe Karkowski  
Senior Water Resources Engineer  
Central Valley Regional Water  
Quality Control Board (CVRWQCB)  
11020 Sun Center Drive  
Rancho Cordova, CA 95670-6114

RE: CALIFORNIA RICE COMMISSION COMMENTS REGARDING METHODOLOGY  
FOR DERIVATION OF PESTICIDE WATER QUALITY CRITERIA FOR THE  
PROTECTION OF AQUATIC LIFE IN THE SACRAMENTO AND SAN JOAQUIN  
RIVER BASINS. PHASE II: METHODOLOGY DEVELOPMENT AND DERIVATION  
OF CHLORPYRIFOS CRITERIA

Dear Mr. Karkowski:

The California Rice Commission (CRC) is a statutory organization representing the entirety of the State's rice industry encompassing 2,500 rice farmers, 40 millers and approximately 500,000 acres of California farmland. California rice grows primarily North of Sacramento in an area that provides winter habitat for migrating waterfowl, shorebirds and 235 species of wildlife. The states of Arkansas, California, Florida, Louisiana, Mississippi, Missouri and Texas produce rice, which accounts for about two percent of the total value of field crops in the United States. In California, rice is one of the top 20 commodities, the seventh largest commodity export and contributes one-half billion dollars annually to the State's economy.

Please accept this letter as CRC comments on the University of California, Davis, Report, *Methodology for Derivation of Pesticide Water Quality Criteria for the Protection of Aquatic Life in the Sacramento and San Joaquin River Basins. Phase II: Methodology Development and Derivation of Chlorpyrifos Criteria* by Dr. Patti TenBrook and Dr. Ronald Tjeerdema; December 2006. The report follows the April 2006 report, *Phase I: Review of Existing Methodologies*, the first in a three-tier process.

Developing pesticide methodology independent of the U.S. Environmental Protection Agency (U.S. EPA) is an onerous task in an attempt to correct a process with no specific deficiencies. Through conversations, the CVRWQCB staff have expressed highly speculative shortcoming in the current U.S. EPA methodology (EPA 1985) used for the data evaluation to register pesticides. The CRC realizes the basis for concerns in the current methodology stem from misunderstanding the pesticide registration process.

The CVRWQCB believes that the U.S. EPA only evaluates data for residue, which was the standard under the Delany Clause (1958-1996), the protocol for pesticide registration specifically addressing dietary exposure. The misunderstanding stems from U.S. EPA establishing a food residue tolerance as the final step in completing the pesticide registration process. In 1996, passage of the Food Quality Protection Act replaced the Delany Clause and gave the U.S. EPA direction to evaluate aggregate and cumulative risks of pesticides. Through the registration evaluation, the U.S. EPA must review data for the potential impact of the pesticide on human health and the environment including environmental fate. The data is not specific to food residue, or even human health. In addition, the data development complies with the U.S. EPA Guidelines for good laboratory practices (GLP), which dictate the specifics of each data set.

Aquatic toxicity evaluations take place under the registration review process through the U.S. EPA/Office of Pesticide Programs (OPP), Environmental Fate and Effects Division. The CRC believes that shortcomings in aquatic toxicity should start at the federal level. Currently, work is underway to open dialog between the U.S. EPA/OPP and the Office of Water as stated in the following announcement:

*"EPA Pesticide Program Updates  
from EPA's Office of Pesticide Programs 03/07/07  
<http://www.epa.gov/pesticides>*

**IN THIS UPDATE:**

*EPA Makes Available a Summary of Aquatic Life Benchmarks for Pesticides*

*EPA's Office of Pesticide Programs (OPP) has been working with state pesticide and water quality agencies to compile a chart of "benchmarks" that states can use to guide their water quality monitoring efforts. Today, OPP is making available the results of that effort: an online summary of aquatic life benchmarks taken from pesticide specific ecological risk assessments. These benchmarks can be used by states to help them target any water monitoring they may intend to undertake and, in doing so, increase the efficiency of regulatory processes that protect aquatic environments.*

*Aquatic life benchmarks are estimates of the concentrations below which pesticides are not expected to have the potential for adverse effects on aquatic life. These benchmarks can be used as indicators of potential hazard to aquatic life, but they are not detailed toxicity and risk assessments. Concentrations of pesticides in streams or groundwater that exceed benchmarks indicate that further work needs to be done to gather more detailed information and to conduct a risk assessment to characterize the likelihood of adverse effects on aquatic life in a given locality.*

*OPP's aquatic life benchmarks are derived from standardized tests that measure the toxicity of an individual pesticide or metabolite to fish, aquatic plants, or aquatic invertebrates. Comparing a measured concentration of a pesticide in water with an aquatic life benchmark provides an initial perspective on the relevance of the pesticide concentration to environmental health and can be used to identify and prioritize sites and pesticides that may require further investigation.*

*Aquatic life benchmarks for 71 pesticides or degradation products can be found at:*

*[http://www.epa.gov/oppefed1/ecorisk\\_ders/aquatic\\_life\\_benchmark.htm](http://www.epa.gov/oppefed1/ecorisk_ders/aquatic_life_benchmark.htm).*

*OPP expects to summarize and publish benchmarks for additional pesticides periodically. Users of these benchmarks are encouraged to explore more detailed information on specific studies (referenced on the Web site above) from which these benchmarks were derived. EPA's Office of Water aquatic life criteria, if derived for a pesticide, are available at <http://www.epa.gov/waterscience/criteria/>."*

The CVRWQCB is striving to develop numeric rather than narrative standards for pesticides in surface waters. While numeric standards may become applicable, the CRC stresses that industry involvement is critical well beyond attendance at public workshops. The CRC has experience from the Rice Pesticides Program where industry input was instrumental in development of performance goals and water quality objectives to mitigate pesticide negative impacts while creating attainable numbers to those using the products. The standards should address the specific toxicity concerns, but not at the lowest possible detection level - an over interpretation of current California water laws. Developing standards specific to California and independent of other State agencies places small business in an economic disadvantage.

The CRC hopes the CVRWQCB finds these comments useful. Currently, the CRC is unclear of the ultimate objective in developing methodology independent of the federal programs because the pesticide registration process provides aquatic toxicity evaluation under the environmental fate and effects review. Identifying deficiencies in aquatic toxicity warrants vetting at a federal level between the U.S. EPA/OPP and the Office of Water. The CVRWQCB should utilize the aquatic benchmark summary the U.S. EPA is developing as the basis in addressing pesticide concerns. Creating standards completely independent to California adds another layer of regulation and cost for doing business in the state. The additional costs create an economic disadvantage to California small businesses when the standards are not applicable on a federal level. Please contact me if you have any questions, or require additional information.

Sincerely,



Roberta L. Firoved  
Industry Affairs Manager

cc: Ms. Pamela Creedon, Executive Officer, CVRWQCB  
Dr. Carl Longley, Chair, CVRWQCB

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